



**NO<sub>x</sub> Budget  
Program**

## **Quarterly Report Review Process For Determining Final Data**

On September 27, 1994, the Ozone Transport Commission (OTC) adopted a Memorandum of Understanding (MOU) on Phase II NO<sub>x</sub> reductions committing the signatory states to the development and proposal of a region-wide nitrogen oxides (NO<sub>x</sub>) emission reduction in 1999 and 2003. The OTC MOU requires reductions in ozone season NO<sub>x</sub> emissions from utility and large industrial combustion facilities to further the effort of achieving the health-based National Ambient Air Quality Standard for ozone. This document describes the processes and criteria the EPA uses to evaluate NO<sub>x</sub> Budget quarterly reports and to determine the cumulative ozone season and report period emissions data after each calendar quarter.

A task force, comprising representatives from the states in the OTC, the Mid-Atlantic Regional Air Management Association, and the U.S. Environmental Protection Agency's (EPA) Acid Rain Division, was charged with the responsibility of developing a model rule for the NO<sub>x</sub> Budget Program. This model rule was created as a template for states in the OTC to use when adopting their own rules for implementing the OTC MOU. While each state proposes and finalizes its rule, the EPA's Acid Rain Division is providing support to the states, including implementing the Emissions Tracking System (ETS) for the OTC NO<sub>x</sub> Budget Program. Part of this implementation includes processing and finalizing data through the collection of quarterly data reports. Specific reporting requirements for OTC NO<sub>x</sub> Budget Program sources are outlined under the NO<sub>x</sub> Budget Program Monitoring Certification and Reporting Instructions, July 3, 1997. Those Acid Rain Program sources that are now affected by the NO<sub>x</sub> Budget Program will simply include their NO<sub>x</sub> Budget Program data within the quarterly reports already required for the Acid Rain Program.

The reporting instructions reflect the requirements agreed to by the participating states and were adopted to ensure emissions measurement and reporting consistency, as well as to facilitate the receipt, analysis and storage of emissions data by ETS. ETS was developed and is maintained by the EPA's Acid Rain Division under the agreement of the participating states.

In accordance with the OTC NO<sub>x</sub> Model Rule, each state will require NO<sub>x</sub> Budget quarterly reports to be submitted as follows: no later than 30 days following the end of each calendar quarter for affected sources with Continuous Emissions Monitoring Systems (CEMS) and 30 days following the end of the second and third calendar quarters for affected sources using an approved alternative monitoring methodology to CEMS (see your state rule for specific reporting requirements). Each report must be certified by the source's Authorized Account Representative (AAR) or Alternate Authorized Account Representative (AAAR) for accuracy.

All NO<sub>x</sub> Budget quarterly reports submitted to the EPA are entered into the ETS, which is used to administer the emissions tracking portion of the Acid Rain Program and the OTC NO<sub>x</sub> Budget Program. ETS is maintained on the EPA mainframe computer located in Research Triangle Park, NC. The reports are required to be electronically submitted directly to ETS by the sources, using "ETS-FTP", an EPA-developed software program. This software program allows sources to submit and resubmit files and obtain "instant feedback" on the status of their quarterly reports.

The "EPA Accepted" values that are used for the purpose of annual reconciliation are based on the calculated daily or hourly values submitted in each quarterly report file. These values are represented by the

*November 2001*

“EPA Accepted” column of the cumulative data summary table contained in each ETS feedback report. This table is developed for each stack/unit/pipe ID identified in the quarterly report. An example of the cumulative data summary table is included at the end of this document.

The EPA’s Quarterly Report Review Process consists of the following steps:

1. **Data Review** - All NO<sub>x</sub> Budget quarterly reports are analyzed to detect deficiencies and to identify reports that must be resubmitted to correct problems. The EPA also identifies reports that were not submitted by the appropriate quarterly report submission deadline.
2. **Data Resubmission** - Revised NO<sub>x</sub> Budget quarterly reports must be obtained from sources by a specified deadline to correct deficiencies found during the Data Review process.
3. **Data Dissemination** - All data are reviewed, and preliminary and final emissions data reports are prepared for public release and compliance determination.

These three primary activities are described below in further detail:

## 1. Data Review

The EPA’s Data Review consists of three steps: Automated Quarterly Report Rejection Criteria Review, Automated Quarterly Report Critical Error Rejection Review and Diskette Submission Review. These steps are described below:

- A) Automated Quarterly Report Rejection Criteria Review - All reports submitted to ETS on the EPA mainframe are first tested against automated rejection criteria. These criteria determine whether a NO<sub>x</sub> Budget quarterly report is basically complete and internally consistent according to reporting requirements, including the ordered record types (RT) described in the Electronic Data Reporting (EDR) format, versions 2.0 and 2.1. The EPA will reject a report if it fails any of the rejection criteria, and will inform the source that the report must be corrected and resubmitted (for tracking purposes, ETS assigns a Status Code 6 to a rejected report).

Sources receive feedback containing the results from this automated review. After reviewing the feedback, the source may revise the report and resubmit it prior to the quarterly report submission deadline. If a report is rejected (Status Code 6), the feedback states that the source must correct and resubmit the report to the EPA no later than 30 days from the date of the feedback (see Section 2. Data Resubmission).

If a source was granted a temporary exemption by their State from electronic reporting requirements and submitted the report on diskette, the EPA provides the feedback in the form of a hardcopy letter or Email to the AAR approximately 20 days after the quarterly report submission deadline. The feedback will notify the AAR of any rejected reports and will request that rejected reports be corrected and resubmitted no later than 30 days after the date of the letter (see Section 2. Data Resubmission). The AAR may electronically resubmit the report using ETS-FTP instead of resubmitting it on a diskette.

The following are some of the rejection criteria that are applied during this automated review:

November 2001

- 1) Does the report contain a facility identification record (RT 100)?
- 2) Does the report contain only one facility identification record (RT 100)?
- 3) Is the facility identification record (RT 100) the first record in the report?
- 4) Is the plant code (ORISPL) in RT 100 contained in the EPA's database of valid ORISPL codes?
- 5) Are the calendar year and/or quarter in RT 100 correct?
- 6) Are all Unit IDs and/or Stack IDs in the report found in the EPA's database of valid IDs for the plant code (ORISPL)?
- 7) Does the report contain basic monitoring plan data (RT 503 or RT 504) for each unit and stack present in the report?
- 8) Is there a NO<sub>x</sub> Budget Program Cumulative Emissions data record (RT 307) present for each unit/stack/pipe defined in the report?
- 9) Does the report contain only ASCII or EBCDIC-compliant characters (except for RTs 520,550, 555,800-899,930/931,940/941 and 999)?
- 10) Is there a Unit Information Record (RT 504) for each Unit ID contained in the report, and is there a Stack/Pipe Header Definition Table Record (RT 503) for each Stack or Pipe ID contained in the report except for reports containing only nonoperational units or stacks?
- 11) Is there at least one of the following for each operating unit (defined in RT 504) or stack/pipe (defined in RT 503) in the report: emissions data (RT 2xx or RT 3xx) or operating data (RT 3xx)?
- 12) Do all records in the report begin with a valid record type code, as defined in EDR v2.0 or v2.1?
- 13) Do the concentration (2XX) and mass emission (3XX) record types contain only positive emission values?
- 14) Is there a valid EDR version (v2.0 or v2.1) present in RT 100?

A report that passes the automated rejection criteria will next undergo an automated critical error rejection review, described below.

- B) Automated Quarterly Report Critical Error Rejection Review - Each report that passes the automated rejection criteria then undergoes a second level of automated software checks to detect critical errors. A report that fails any one of the checks is assigned a "Critical Error Rejection" status (Status Code 5) within ETS. In such a case the EPA will inform the source that the report contains critical errors and that the critical errors must be corrected, and the file must be resubmitted (as defined in Section 2. Data Resubmission).

Sources receive the results from this automated critical error rejection review in their feedback. If a report receives a critical error rejection (Status Code 5), the feedback states that the source must correct and resubmit the report to the EPA no later than 30 days from the date of the feedback (see Section 2. Data Resubmission). If a source was granted a temporary exemption by their State from the electronic reporting requirements and submitted the report on diskette, the source's AAR will receive feedback in the form of a hardcopy letter or e-mail containing these results approximately 20 days after the quarterly report submission deadline. The AAR may electronically resubmit the report using ETS-FTP instead of resubmitting it on a diskette.

The following are some of the critical error rejection criteria that are applied during this automated review:

- 1) Does the sum of the hourly NO<sub>x</sub> Mass records (RT 328) equal the cumulative ozone season NO<sub>x</sub>

- tons record (RT 307)?
- 2) Does the sum of the hourly Heat Input records (RT 300) equal the cumulative ozone season Heat Input record (RT 307)?
  - 3) Does the sum of the hourly NO<sub>x</sub> Mass records (RT 328) equal the reporting period NO<sub>x</sub> Tons record (RT 307)?
  - 4) Does the sum of the hourly Heat Input records (RT 300) equal the reporting period Heat Input record (RT 307)?
  - 5) Does each reported Unit Information record (RT 504) have at least one associated Monitoring Methodology Information record (RT 585)?
  - 6) Does each reported Unit Information record (RT 504) have at least one associated Unit Classification by Fuel Type record (RT 587)?
  - 7) Is every hour of Heat Input Rate (RT 300) less than 99999 mmBtu/hour?
  - 8) Is every hour of average NO<sub>x</sub> emissions rate (RT 320,323,324, and/or 325) less than 5.00 lb/mmBtu?
  - 9) Is the sum of the hourly NO<sub>x</sub> mass emissions reported in RT 360 for the cumulative ozone season less than 25 tons?
  - 10) Is the sum of the hourly NO<sub>x</sub> mass emissions reported in RT 360 for the year-to-date less than 50 tons?
  - 11) Do all hourly emissions data reported in the file fall within the current submission quarter?
  - 12) Are the proper program indicators being reported for each unit in RT 505?
  - 13) Is the fuel type reported in RT 585 appropriate for a Low Mass Emissions (LME) unit?
  - 14) Do the program indicators reported for each unit in RT 505 match those stored by the EPA?
  - 15) Is there a program indicator present in RT 505?
  - 16) Does the reporting frequency reported for each unit in RT 505 match what is stored by the EPA?
  - 17) Are both the required NO<sub>x</sub> Budget Program Certification Statement and Authorized Account Representative Signature and General Certification Statement (RTs 930/931 and 940/941) present in the file?
  - 18) Are there any negative values in hourly record types?
  - 19) Are the Bias Adjustment Factors for Flow (RT 220) and NO<sub>x</sub> (RT 320) less than 1?
  - 20) Is every hour of Heat Input (RT 300) less than 99999 mmBtu/hour?
  - 21) Are there 50 or more recalculation errors on reported hourly emissions for NO<sub>x</sub> mass and heat input?
  - 22) Is the EDR version in RT 100 missing or invalid?
  - 23) Is an hourly NO<sub>x</sub> mass emissions record reported but the unit operating time is zero?
  - 24) Is there duplicate record for a clock hour?
  - 25) Is RT 504 incorrectly reported for a stack or pipe ID?
  - 26) Is RT 503 incorrectly reported for a unit ID?
  - 27) Is multiple RT 504 reported for a unit ID?
  - 28) Does the EDR contain at least one RT 102?
  - 29) Does the EDR contain more than one RT 102?
  - 30) Does RT 520 indicate NO<sub>x</sub> mass as the parameter monitored?
  - 31) Is the F-Factor blank or missing for hour using CEMS for heat input rate?
  - 32) Is there a NO<sub>x</sub> Mass Emissions data record (RT 328) present for each operating unit/stack/pipe defined in the report?
  - 33) Is the DAHS component properly reported for every monitoring system?

After the critical error rejection review, the report then undergoes a final level of ETS software checks to detect other types of errors and inconsistencies (“informational errors”). Results from this final analysis are also included in the ETS feedback provided to the AAR. ETS generates messages to describe the informational errors (if any) detected in the report and assigns a “Quarterly Report Contains Informational Errors” status (Status Code 9). The AAR may then revise and resubmit the report to correct informational errors in the current quarter and should ensure that such errors do not occur in subsequent NO<sub>x</sub> Budget quarterly reports.

As part of ongoing Quality Assurance (QA) activities, the EPA expects to incorporate certain informational errors into the set of critical error rejection criteria (Status Code 5) or incorporate some informational errors into the set of rejection criteria (Status Code 6). In other words, errors currently identified by ETS for the source to correct in future submissions may become errors which the source must correct before the NO<sub>x</sub> Budget quarterly report containing the specified error(s) can be accepted by the EPA.

- C) *Diskette Submission Review* - If a source was granted a temporary exemption from the electronic reporting requirements and submitted the reports on diskette, the reports must be accompanied by a letter containing certification statements signed by the AAR or alternate AAR. Diskette reports are examined and must pass the following rejection criteria (specific to diskette submissions) before they can be transmitted to the EPA mainframe for further automated analysis (*Automated Quarterly Report Rejection Review* and *Automated Quarterly Report Critical Error Rejection Review*):
- 1) All reports contained on a diskette must be resubmitted if the diskette is found to contain a computer virus.
  - 2) All reports contained on a diskette must be resubmitted if the diskette is unreadable (e.g., physically damaged).
  - 3) All reports contained on a diskette in a compressed (\*.ZIP) file or self-extracting (\*.EXE) compressed file must be resubmitted if the EPA cannot successfully “decompress” the report.
  - 4) Any report contained on a diskette must be resubmitted if the report is unreadable (e.g., wrong file format or corrupted) or missing.
  - 5) Any report contained on a diskette must be resubmitted if the report contains two or more units that are not associated through their stack configuration.
  - 6) Any report for a common or multiple stack configuration (including associated units) contained on a diskette must be resubmitted if the same unit or stack is contained in more than one report. The stack(s) and associated unit-level data must be contained in a single report.

The EPA will reject a diskette report if it fails any one of these criteria and will notify the source by telephone that the report must be resubmitted by a stated deadline (typically within five calendar days after the telephone call). On the other hand, if a diskette report passes these criteria, the EPA will transmit it to the mainframe for automated review.

Additionally, the quarterly reports are audited using the Monitoring Data Checking (MDC) Software. EPA encourages sources to use MDC Software to check the quality of their electronic monitoring plans, certification, and quality assurance testing data before submitting reports to EPA. Errors identified by this

software may require a resubmittal of the report to the ETS. For more information on MDC software and other monitoring information, please check the Clean Air Markets Division website at:

<http://www.epa.gov/airmarkets/monitoring/index.html>

## **2. Data Resubmission**

As described above in the Data Review section, a source may need to resubmit a NO<sub>x</sub> Budget quarterly report to correct specified problems. A NO<sub>x</sub> Budget quarterly report resubmitted to the EPA replaces the previous submission in ETS and at a minimum will also undergo the automated Data Review processes previously described. As a result, each resubmitted report must be complete; it must contain all the required data records for emissions, Quality Assurance/Quality Control, and monitoring plan data. Additionally, a resubmitted report must include a NO<sub>x</sub> Budget Program Certification Statement and Authorized Account Representative Signature and the NO<sub>x</sub> Budget Program General Certification Statement records (RTs 930 and 931). If you are reporting using EDR version 2.1, then your resubmission must include the Subpart H Certification Statement and Authorized Account Representative Signature and the Subpart H General Certification Statement (RTs 940 and 941). If a source was granted a temporary exemption from the electronic reporting requirements and submitted the reports on diskette, the reports must be accompanied by a letter containing the certification statements signed by the AAR or alternate AAR. If the resubmitted report passes all rejection criteria and critical error criteria, and the problem(s) identified in the prior submission was also corrected, no further action is required by the AAR. The same applies to 'Ozone Season' reporters (2<sup>nd</sup> and 3<sup>rd</sup> quarter).

### Resubmission Procedures and Deadlines

During the 30-day NO<sub>x</sub> Budget quarterly report submission period following the end of each calendar quarter, a source that uses ETS-FTP to submit its reports may revise and resubmit the reports for that quarter, as necessary, before the quarterly report submission deadline. As a result, most of the NO<sub>x</sub> Budget quarterly reports will pass all rejection and critical error rejection criteria before the submission deadline. The remaining reports typically contain problems that cause the EPA to reject them, or they contain other significant inaccuracies identified by the EPA and/or the source. These reports will need to be corrected and resubmitted to the EPA. Resubmission deadlines, including final NO<sub>x</sub> Budget quarterly report resubmission deadlines, are discussed below.

After the quarterly reporting deadline, a source must first contact the EPA before resubmitting a NO<sub>x</sub> Budget quarterly report so the EPA can determine whether the resubmission is permissible and prepare ETS to receive the resubmission. If the EPA has rejected the report (Status Code 6 or 5), the source AAR must correct the report and resubmit it by the deadline specified in the feedback. If a report contains other significant errors identified by the EPA and/or source (as described below), the report must be resubmitted according to EPA guidance.

If the EPA and/or the source discover an error which impacts the emissions results, the EPA will determine whether the impact is significant and warrants correction of the emissions data through the resubmission of

any or all of the NO<sub>x</sub> Budget quarterly reports for that calendar year. If a source discovers such an error, the source may voluntarily inform the EPA and request that the EPA allow resubmission of the affected report(s). If the EPA approves the request, the source will be instructed to resubmit the NO<sub>x</sub> Budget quarterly report. Some of the criteria used to determine whether a NO<sub>x</sub> Budget quarterly report should be resubmitted to the EPA are as follows:

- 1) Is the reported NO<sub>x</sub> emission rate correct within 0.01 lb/mmBtu and 2%?
- 2) Is the reported NO<sub>x</sub> mass emissions correct within 1 ton?
- 3) Is the reported heat input correct within 1,000 mmBtu and 1%?
- 4) Were required quarterly linearity test data and results (RTs 601 and 602) not reported or were they incomplete?
- 5) Were required RATA test data and results (RTs 610 and 611) not reported or were they incomplete?
- 6) Were the required daily monitor calibration tests or flow monitor interference check tests not reported or were they incomplete?
- 7) Was the required quarterly flow monitor leak check test not reported or was it incomplete?
- 8) Did the source describe other problems where the EPA determined that correction of the error(s) and resubmission of the affected report(s) will result in significant improvement in the data?
- 9) Are there any critical errors in the report as identified by the MDC software?

As part of ongoing QA activities, the EPA may modify these criteria.

#### Final Quarterly Report Resubmission Deadlines for Cumulative Ozone Season Data:

To finalize the cumulative ozone season emissions data as early as possible in anticipation of compliance determination, the EPA has established the following final quarterly report resubmission deadlines for specified calendar quarters:

2<sup>nd</sup> quarter 2002 - Resubmission Deadline: Thursday, October 31, 2002

3<sup>rd</sup> quarter 2002 - Resubmission Deadline: Tuesday, December 31, 2002

While the EPA will make every effort to assure that the current ozone season's data are accurate, the EPA will not unilaterally change or correct submitted data without providing notice to the affected source. To the extent practicable, data reconciliation efforts, including resubmissions, will be made in cooperation with the source. Nonetheless, the responsibility to ensure the accuracy of the data submissions remains with the source.

### **3. Data Dissemination**

All NO<sub>x</sub> Budget quarterly reports received by the EPA are maintained in a central database within ETS. This database is updated when NO<sub>x</sub> Budget quarterly reports are resubmitted. The EPA regularly extracts data from ETS for public distribution and compliance purposes. Reports containing the preliminary ozone season and year-to-date summary emissions and related data are prepared for release to the public after the 2<sup>nd</sup> and 3<sup>rd</sup> quarters, approximately 21 days after the end of each calendar quarter. Final summary emissions data are made available approximately five months following the end of the compliance period.

## EPA Accepted Data

Here is an example of the “EPA Accepted” values:

### 4/2000 CUMULATIVE DATA SUMMARY TABLE

ORISPL: Plant Name:

Unit/Stack/Pipe ID:

	Hourly or Daily	Reporting Period or Quarterly	Cumulative Annual or Cumulative Ozone Season	<b>EPA Accepted</b>
SO2				
CO2				
Heat Input				
Ozone Heat Input	1467252.7		1467252.7	<b>1467252.7</b>
NOx Rate				
NOx Mass				
Ozone NOx Mass	238.9		238.9	<b>238.9</b>

Raw emissions data, preliminary quarterly summary reports, and state-level status reports are available on the emissions page of the Clean Air Markets Division's Web site at:

<http://www.epa.gov/airmarkets/emissions/index.html#prelim>.